UNITED STATES DEPARTMENT OF AGRICULTURE
BUREAU OF PUBLIC ROADS
DIVISION OF AGRICULTURAL ENGINEERING

S. H. McCRORY, CHIEF

MONTHLY NEWS LETTER

WASHINGTON, D.C., JULY 20, 1929

THE ANNUAL MEETING OF THE AMERICAN SOCIETY OF AGRICULTURAL ENGINEERS WAS HELD AT DALLAS, TEXAS JUNE 24-27. THE HOLDING OF THE MEETING AT DALLAS WAS FORTUNATE FROM THE STANDPOINT OF ATTENDANCE OF MEMBERS OF OUR STAFF, OWING TO ITS RATHER CENTRAL LOCATION WITH RESPECT TO OUR WORK. BOTH MR. McCRORY AND MR. McLAUGHLIN ATTENDED THE MEETING. PAPERS WERE READ BY F. C. SCOBEY, C. E. RAMSER, AND C. A. BENNETT. R. B. GRAY, L. A. JONES, R. A. NORTON AND P.C. McGREW WERE ALSO PRESENT. IN ADDITION, THERE WERE PRESENT R. G. HEMPHILL, WHO SUBSTITUTED ON THE GENERAL PROGRAM FOR MR. MORSE, CHAIRMAN OF THE TEXAS BOARD OF WATER ENGINEERS, AND L. T. JESSUP WHO WAS AT THAT TIME IN DALLAS IN CONNECTION WITH HIS TRIP THROUGH THE SOUTHWEST ON HIS STUDY OF "PUMPING FOR DRAINAGE."

PRIOR TO THE DALLAS MEETING THERE WAS HELD AT COLLEGE STATION, TEXAS, A SOIL CONFERENCE, PARTICIPATED IN BY FEDERAL AND STATE OFFICERS WHO ARE CONCERNED WITH THIS SUBJECT IN THE SOUTHWESTERN STATES. MESSRS. JONES, RAMSER AND NORTON ATTENDED THIS SOIL CONFERENCE.

FOLLOWING THE DALLAS MEETING THERE WAS HELD, ON JULY 1 AND 2, NEAR DALLAS, A TERRACING DEMONSTRATION WHICH WAS ALSO ATTENDED BY SEVERAL MEMBERS OF OUR STAFF.

P. A. EWING LEFT BERKELEY JULY 1 TO TAKE PART IN A SERIES OF CONFERENCES IN WASHINGTON, RELATIVE TO THE IRRIGATION SCHEDULE TO BE EMPLOYED IN CONNECTION WITH THE FORTHCOMING DECENNIAL CENSUS. THESE CONFERENCES WERE ALSO PARTICIPATED IN BY MR. McCRORY AND R. D. MARSDEN, THE LATTER BEING CONCERNED ESPECIALLY WITH THE DRAINAGE SCHEDULE. MR. EWING RETURNED TO BERKELEY JULY 15.

L. A. JONES ACCOMPANIED BY MR. H. H. BENNETT, BUREAU OF CHEMISTRY AND SOILS, SPENT THE WEEK OF JULY 7-13, EXAMINING POSSIBLE SITES FOR ESTABLISHING A SOIL EROSION EXPERIMENTAL FARM IN MISSOURI.

H. C. MAUER OF VIRGINIA, WAS APPOINTED JUNIOR AGRICULTURAL ENGINEER, EFFECTIVE JUNE 20. MR. MAUER'S HEADQUARTERS WILL BE AT BELTSVILLE, MARYLAND. IT IS EXPECTED THAT HIS WORK, FOR THE PRESENT, WILL BE LARGELY IN THE NATURE OF SERVICE WORK TO BE RENDERED OTHER BUREAUS OF THE DEPARTMENT.

George R. Boyd, assisted by H. C. Mauer, was engaged from July 1-13, in making surveys of several small bottom land areas in Webster and Nicholas counties, West Virginia. The purpose of these surveys was to secure data for use in preparing a report on the engineering phases of a rather complete economic survey of these two counties, from the standpoint of land utilization. The economic side of the project is being handled by the Division of Land Economics, Bureau of Agricultural Economics, and the Agricultural Economics Department of the West Virginia University. This is expected to be a forerunner of a number of similar land utilization surveys in different states.

D. L. Yarnell reports the completion of the study of the proposed cut-offs in the Des Moines River at Ottumwa, Iowa, which study was made by the use of a working model as reported in a previous issue of the NEWS LETTER.

D. G. Miller made, during the week beginning July 8, his annual inspection of concrete samples immersed in Medicine Lake, S. D. He was accompanied by Dr. Lord of the Bureau, and several State and commercial representatives who are interested in the question of the durability of concrete when subjected to so-called alkali soils.

George A. Mitchell who is in charge of the sewage irrigation experiment project at Vineland, N.J., sailed for Europe July 16. While in Europe, Mr. Mitchell expects to make a study of sewage irrigation as practiced there. He expects to return to this country in October.

George M. Warren left Washington July 9, for a trip to the Northeastern States, for the purpose of completing his field study of the one-chamber septic tank, preparatory to writing a bulletin on this subject. Previously, Mr. Warren had covered the Southern and Central States in this connection.

W. W. McLaughlin, R. L. Parshall, W. A. Hutchins, and M. R. Lewis attended the conference of the Western Irrigation and Drainage Association at Logan, Utah, June 18-20. This organization is composed of the irrigation and drainage engineers of experiment stations of the Western States, and of the Division of Agricultural Engineering of the U. S. Department of Agriculture. The purpose of the meeting was to discuss the methods used in research work and the results obtained.

M. R. Lewis, who is in charge of the cooperative irrigation and drainage investigations in the State of Oregon, reports as follows on the work in the Baker Valley.

"The Baker Valley, which should not be confused with the much discussed Baker project of the Bureau of Reclamation, covers about 68,000 acres in Baker County, Oregon. The area is all in private ownership and is devoted primarily to stock raising and dairying. Both drainage and a better supply of irrigation water are needed to make possible maximum production of forage or other crops.

INVESTIGATIONS IN THE FIELD HAVE INCLUDED THE PREPARATION OF A ROUGH TOPOGRAPHIC MAP, A CROP SURVEY, AN ALKALI SURVEY, WATER TABLE STUDIES, SURFACE WATER SUPPLY INVESTIGATIONS, A GEOLOGICAL RECONNAISSANCE MADE BY MR. A. M. PIPER, OF THE UNITED STATES GEOLOGICAL SURVEY, AND PUMPING TESTS ON SHALLOW WELLS. THE RESULTS OF THIS WORK LEAD TO THE CONCLUSION THAT PUMPING FROM WELLS IS PROBABLY THE BEST METHOD OF MEETING BOTH THE DRAINAGE AND THE SUPPLEMENTAL IRRIGATION PROBLEMS.

IT HAS BEEN VERY INTERESTING TO NOTE THE CHANGE IN THE LOCAL ATTITUDE AS TO THE RELATIVE NEED FOR DRAINAGE AND A BETTER IRRIGATION SUPPLY. A YEAR AGO THE CONTROL OF ALKALI WAS STRESSED BY THE COUNTY AGENT AND OTHERS AS BEING THE MOST PRESSING PROBLEM IN THE AREA. WHILE THE ACTUAL NEED FOR DRAINAGE HAS IN NO WAY DECREASED, THE PRESENT EMPHASIS IS ON THE NEED FOR LATE SEASON IRRIGATION WATER. THIS CHANGE OF ATTITUDE IS HELPFUL AS THE FARMERS SEEM TO REGARD A WELL WHICH WILL SUPPLY ADDITIONAL WATER AS A PROFITABLE INVESTMENT WHILE A DRAINAGE WELL APPEARS TO BE JUST AN EXPENSE.

THE STATE HIGHWAY DEPARTMENT IS ALSO INTERESTED IN THIS PROBLEM AS A PORTION OF THE OLD OREGON TRAIL HAS GONE TO PIECES EACH WINTER ON ACCOUNT OF POOR DRAINAGE. IT IS POSSIBLE THAT THEY MAY COOPERATE IN PUTTING IN AN EXPERIMENTAL WELL. FROM THEIR POINT OF VIEW THE QUESTION OF THE NECESSITY FOR PUMPING DURING THE WINTER TO PROTECT THE HIGHWAY WHEN IRRIGATION WATER IS NOT NEEDED IS OF PARAMOUNT IMPORTANCE.

MUCH INTEREST IN THE USE OF WELLS HAS BEEN AROUSED BY TRIPS TO THE BOISE VALLEY IN IDAHO, WHERE MR. W. G. SLOAN, FORMERLY OF THIS DIVISION, HAS CHARGE OF CONSIDERABLE WORK OF THIS NATURE."

W. A. HUTCHINS VISITED THE STATES OF NEVADA, UTAH, MONTANA, AND WASHINGTON, IN ORDER TO START THE FIELD WORK ON REVISION OF BULLETIN 1177, "IRRIGATION DISTRICT OPERATION AND FINANCE." HE MET MR. EWING AT OLYMPIA AND VISITED THE DEPARTMENT OF CONSERVATION AND DEVELOPMENT OFFICES IN COMPANY WITH HIM, MR. EWING HAVING SPENT SOME TIME IN OREGON ON THE SAME PROJECT.

GUY ERVIN LEFT WASHINGTON JULY 15, TO ASSIST MR. HUTCHINS IN CONNECTION WITH COLLECTING DATA IN THE FIELD, TO BE USED AS A BASIS FOR THE REVISION OF DEPARTMENT BULLETIN 1177 "IRRIGATION DISTRICT OPERATION AND FINANCE." MR. ERVIN ON THIS TRIP WILL INCLUDE THE STATES OF NEBRASKA, MONTANA AND WYOMING. HE WILL RETURN TO WASHINGTON ABOUT SEPTEMBER 1.

WORK ON WIND CAVE DAM, HOT SPRINGS, S. D., FOR THE U.S. BIOLOGICAL SURVEY, IS PROGRESSING UNDER THE SUPERVISION OF A. L. FELLOWS OF THE BERKELEY OFFICE, AS RESIDENT ENGINEER. THE DAM SHOULD BE COMPLETED IN JULY OR EARLY IN AUGUST.

ADVERTISEMENT FOR BIDS ON BEAR RIVER MIGRATORY BIRD REFUGE, UTAH, FOR THE U. S. BIOLOGICAL SURVEY, WAS STARTED DURING JUNE. BIDS WILL BE OPENED JULY 26. THIS WORK WILL BE UNDER THE SUPERVISION OF L.M. WINSOR OF THE BERKELEY OFFICE, STATIONED AT LOGAN, UTAH.

MR. MCCRORY SPENT JUNE 20 IN TOLEDO REVIEWING THE PROGRESS OF THE WORK ON CORN BORER CONTROL MACHINERY. IN THIS CONNECTION HE INSPECTED THE ONE-ACRE EMERGENCE CAGES BEING CONSTRUCTED UNDER THE SUPERVISION OF T. A. H. MILLER.

THAYER CLEAVER RETURNED JULY 8 FROM URBANA, ILLINOIS, WHERE HE HAS BEEN WORKING ON THE COOPERATIVE CORN BORER PROJECT WITH THE FARM MECHANICS DEPARTMENT OF THE UNIVERSITY OF ILLINOIS. IN ANTICIPATION OF THE ARRIVAL OF THE BORER, STUDIES OF PLOWS AND OTHER MACHINES FOR COMBATING THE BORER UNDER ILLINOIS CONDITIONS HAVE BEEN CONDUCTED THE PAST TWO YEARS.

FRANK IRONS HAS SENT THE COMPLETED MANUSCRIPT FOR A LEAFLET ON STALK SHAVERS FOR CORN BORER CONTROL, TO WASHINGTON. IF PRESENT PLANS MATERIALIZE, STALK SHAVERS AND BINDERS WITH STATIONARY LOW-CUTTING ATTACHMENTS WILL BE SHOWN AT SEVERAL OF THE COUNTY FAIRS IN OHIO AND MICHIGAN WHERE THE BORER INFESTATION IS HEAVIEST.

PROFESSOR HENRY GIESE, DEPARTMENT OF AGRICULTURAL ENGINEERING, OHIO STATE COLLEGE, WAS APPOINTED JUNE 20, AS SENIOR AGRICULTURAL ENGINEER, TO DIRECT THE NEW PROJECT RELATING TO FARM STRUCTURES RESEARCH.

THIS PROJECT WAS APPROVED BY THE SECRETARY OF AGRICULTURE AT THE URGENT REQUEST OF THE AMERICAN SOCIETY OF AGRICULTURAL ENGINEERS. ITS PURPOSE IS TO PLACE ON A HIGHER PLANE, RESEARCH IN THE FIELD OF FARM STRUCTURES. THE PROCEDURE FOLLOWED WILL BE SOMEWHAT SIMILAR TO THAT EMPLOYED IN CONNECTION WITH THE FARM MECHANICAL EQUIPMENT PROJECT WHICH WAS DIRECTED BY PROFESSORS J. B. DAVIDSON AND H. B. WALKER, UNDER TEMPORARY APPOINTMENTS OF THIS DIVISION. AFTER PROFESSOR GIESE HAS COMPLETED A SURVEY OF RESEARCH NOW IN PROGRESS, ATTENTION WILL BE GIVEN TO COMPILING A LIST OF ADDITIONAL RESEARCH URGENTLY NEEDED, AND FINALLY AN EFFORT WILL BE MADE TO PUT THE PROGRAM INTO EFFECT AMONG THE VARIOUS AGENCIES AVAILABLE FOR RESEARCH.

THIS PROJECT FILLS THE GAP THAT HAS LONG BEEN RECOGNIZED TO EXIST IN THE REALM OF AGRICULTURAL ENGINEERING RESEARCH. FARM PRACTICE IN STRUCTURES HAS HERETOFORE LARGELY FOLLOWED PRECEDENT. IT IS HOPED THAT ULTIMATELY THE PROJECT WILL RESULT IN MORE ADEQUATE AND ECONOMICAL STRUCTURES ON THE FARM.